

FILE 'HOME' ENTERED AT 14:43:47 ON 11 JUL 2008

=> fil hcapl COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'HCAPLUS' ENTERED AT 14:44:04 ON 11 JUL 2008  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 11 Jul 2008 VOL 149 ISS 3  
FILE LAST UPDATED: 10 Jul 2008 (20080710/ED)

HCplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2008.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s hirst j/au
L1          35 HIRST J/AU

=> e hirst j/au
E1          2      HIRST IAN D/AU
E2          1      HIRST IAN J/AU
E3          35 --> HIRST J/AU
E4          7      HIRST J A/AU
E5          1      HIRST J C/AU
E6          6      HIRST J D/AU
E7          1      HIRST J E/AU
E8          4      HIRST J F/AU
E9          14     HIRST J J/AU
E10         6      HIRST J M/AU
E11         1      HIRST J N/AU
E12         1      HIRST J P/AU
```

```
=> s e3
L2          35 "HIRST J"/AU
```

```
=> d scan ibib 1-35
'1-35' IS NOT A VALID FORMAT FOR FILE 'HCAPLUS'
```

```
L2          35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN
CC          71-10 (Nuclear Technology)
Section cross-reference(s): 48
TI          Handling high activity components on the SNS
```

ST spallation neutron source active component remote handling design  
IT Materials handling  
    (handling of highly active components at spallation neutron source)  
IT Proton accelerators  
    (neutron generators; handling of highly active components at spallation neutron source)  
IT Neutron generators  
    (proton accelerators; handling of highly active components at spallation neutron source)  
IT Nuclear reactions  
    (spallation; handling of highly active components at spallation neutron source)

The following are valid formats:

ABS ----- GI and AB  
ALL ----- BIB, AB, IND, RE  
APPS ----- AI, PRAI  
BIB ----- AN, plus Bibliographic Data and PI table (default)  
CAN ----- List of CA abstract numbers without answer numbers  
CBIB ----- AN, plus Compressed Bibliographic Data  
CLASS ----- IPC, NCL, ECLA, FTERM  
DALL ----- ALL, delimited (end of each field identified)  
DMAX ----- MAX, delimited for post-processing  
FAM ----- AN, PI and PRAI in table, plus Patent Family data  
FBIB ----- AN, BIB, plus Patent FAM  
IND ----- Indexing data  
IPC ----- International Patent Classifications  
MAX ----- ALL, plus Patent FAM, RE  
PATS ----- PI, SO  
SAM ----- CC, SX, TI, ST, IT  
SCAN ----- CC, SX, TI, ST, IT (random display, no answer numbers;  
          SCAN must be entered on the same line as the DISPLAY,  
          e.g., D SCAN or DISPLAY SCAN)  
STD ----- BIB, CLASS  
  
IABS ----- ABS, indented with text labels  
IALL ----- ALL, indented with text labels  
IBIB ----- BIB, indented with text labels  
IMAX ----- MAX, indented with text labels  
ISTD ----- STD, indented with text labels  
  
OBIB ----- AN, plus Bibliographic Data (original)  
OIBIB ----- OBIB, indented with text labels  
  
SBIB ----- BIB, no citations  
SIBIB ----- IBIB, no citations  
  
HIT ----- Fields containing hit terms  
HITIND ----- IC, ICA, ICI, NCL, CC and index field (ST and IT)  
          containing hit terms  
HITRN ----- HIT RN and its text modification  
HITSTR ----- HIT RN, its text modification, its CA index name, and  
          its structure diagram  
HITSEQ ----- HIT RN, its text modification, its CA index name, its  
          structure diagram, plus NTE and SEQ fields  
FHITSTR ----- First HIT RN, its text modification, its CA index name, and  
          its structure diagram  
FHITSEQ ----- First HIT RN, its text modification, its CA index name, its  
          structure diagram, plus NTE and SEQ fields

KWIC ----- Hit term plus 20 words on either side  
OCC ----- Number of occurrence of hit term and field in which it occurs

To display a particular field or fields, enter the display field codes. For a list of the display field codes, enter HELP DFIELDS at an arrow prompt (>). Examples of formats include: TI; TI,AU; BIB,ST; TI,IND; TI,SO. You may specify the format fields in any order and the information will be displayed in the same order as the format specification.

All of the formats (except for SAM, SCAN, HIT, HITIND, HITRN, HITSTR, FHITSTR, HITSEQ, FHITSEQ, KWIC, and OCC) may be used with DISPLAY ACC to view a specified Accession Number.

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):all  
'ALL' IS NOT VALID HERE

To display more answers, enter the number of answers you would like to see. To end the display, enter "NONE", "N", "0", or "END".  
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):34

L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 6-1 (General Biochemistry)  
Section cross-reference(s): 9  
TI Voltammetric studies of bidirectional catalytic electron transport in Escherichia coli succinate dehydrogenase: comparison with the enzyme from beef heart mitochondria  
ST succinate dehydrogenase electron transport Escherichia mitochondria;  
voltammetry succinate dehydrogenase electron transport Escherichia  
IT Protein sequences  
    (alignment; voltammetric studies of bidirectional catalytic electron transport in Escherichia coli succinate dehydrogenase in relation to the enzyme from beef heart mitochondria)  
IT Electrode reaction  
Electron transport  
Redox potential  
Reduction potential  
Voltammetry  
pH  
    (voltammetric studies of bidirectional catalytic electron transport in Escherichia coli succinate dehydrogenase in relation to the enzyme from beef heart mitochondria)  
IT 9002-02-2, Succinate dehydrogenase  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); BIOL (Biological study); PROC (Process)  
    (voltammetric studies of bidirectional catalytic electron transport in Escherichia coli succinate dehydrogenase in relation to the enzyme from beef heart mitochondria)  
IT 110-15-6, Butanedioic acid, biological studies 110-17-8, 2-Butenedioic acid (2E)-, biological studies  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
    (voltammetric studies of bidirectional catalytic electron transport in Escherichia coli succinate dehydrogenase in relation to the enzyme from beef heart mitochondria)  
IT 146-14-5, Fad  
RL: BPR (Biological process); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)  
    (voltammetric studies of bidirectional catalytic electron transport in Escherichia coli succinate dehydrogenase in relation to the enzyme from

beef heart mitochondria)

L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 20-3 (History, Education, and Documentation)

Section cross-reference(s): 40

TI A chromatographic investigation of industrial dyes  
ST dye chromatog lab expt

IT Dyes

(TLC of, laboratory experiment in)

IT Laboratory experiment  
(in TLC of dyes)

IT Chromatography, thin-layer  
(of dyes)

L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 22 (Physical Organic Chemistry)

TI Effect of electron-withdrawing substituents from the meta and para positions in aromatic nucleophilic replacement reactions

ST arom nucleophilic substitution; fluorobenzenes substitution; kinetics substitution fluorobenzenes

IT Kinetics of methanolysis  
(of fluorobenzene derivs.)

IT Substituent effect  
(of fluorobenzene derivs., methanolysis in relation to)

IT 401-80-9 402-44-8 455-15-2 657-46-5 35564-19-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(methanolysis of, kinetics of)

L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 22 (Physical Organic Chemistry)

TI Aromatic nucleophilic replacement. XVI. Reactions of o-fluoro- and p-fluoronitrobenzene and 1-fluoro-3,5-dinitrobenzene with sulfite ions, and of o- and p-fluoronitrobenzene with isopropoxide ions

ST sulfite ion fluoronitrobenzene reaction; isopropoxide ion fluoronitrobenzene reaction; fluoronitrobenzene reaction isopropoxide ion

IT Entropy  
(of activation, of substitution reactions of fluoronitrobenzene derivs.)

IT Activation energy of substitution reactions  
Kinetics of substitution reactions

Substitution reactions

(of fluorine by sulfite ion in fluoronitrobenzene derivs.)

IT Isopropoxy group  
(substitution reactions of, for fluorine in fluoronitrobenzene derivs.)

IT 7782-41-4, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(substitution reactions of, by sulfite ion in fluoronitrobenzene derivs.)

IT 14265-45-3

RL: RCT (Reactant); RACT (Reactant or reagent)

(substitution reactions of, for fluorine in fluoronitrobenzene derivs.)

IT 350-46-9 369-18-6 1493-27-2

RL: RCT (Reactant); RACT (Reactant or reagent)

(substitution reactions of, mechanism of)

L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 22 (Physical Organic Chemistry)

TI Aromatic nucleophilic replacement. XIII. Reactions of nitroanilines with picryl chloride in methanol

ST arom nucleophilic substitution; nucleophilic substitution arom; nitro anilines picryl chloride; picryl chloride nitro anilines; anilines nitro

picryl chloride  
IT Activation energy  
(of aniline nitro derivs. reaction with picryl chloride)  
IT Kinetics, reaction  
(of aniline nitro derivs. with picryl chloride)  
IT 99-09-2P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
IT 88-88-0  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with aniline nitro derivs.)  
IT 100-01-6 618-87-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with picryl chloride)

L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 22 (Physical Organic Chemistry)  
TI Aromatic nucleophilic substitution. XI. Effect of meta substituents  
ST NUCLEOPHILIC REPLACEMENT; META SUBSTITUENT EFFECT; REPLACEMENT  
NUCLEOPHILIC; SUBSTITUENT META EFFECT; EFFECT META SUBSTITUENT  
IT Activation energy  
Kinetics, reaction  
(of 1-fluoro-3-nitrobenzene derivs. with methoxide ion)  
IT 369-18-6 402-67-5 454-72-8 454-73-9 499-08-1 2265-94-3  
2369-12-2 3819-88-3 4815-64-9 7087-27-6 7087-60-7 7087-61-8  
7087-65-2 14027-75-9  
RL: PRP (Properties)  
(reaction with methoxide ion, kinetics of)  
IT 3315-60-4, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(with 1-fluoro-3-nitrobenzene derivs., kinetics of)

L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 32 (Physical Organic Chemistry)  
TI Aromatic nucleophilic substitution. IX. The reaction of  
1-halo-2,4-dinitrobenzenes with sulfite ion in aqueous ethanol  
IT Activation energy, Heat of activation  
Frequency factor, Preexponential factor  
(of 1-halo-2,4-dinitrobenzene reaction with sulfites)  
IT Reaction kinetics and(or) Velocity  
(of 1-halo-2,4-dinitrobenzenes with sulfites)  
IT Sulfites  
(reaction with 1-halo-2,4-dinitrobenzenes)  
IT 64-17-5, Ethyl alcohol  
(1-halo-2,4-dinitrobenzene reaction with sulfites in)  
IT 97-00-7, Benzene, 1-chloro-2,4-dinitro-  
(reaction of, with sulfite ion)  
IT 70-34-8, Benzene, 1-fluoro-2,4-dinitro- 100-00-5, Benzene,  
1-chloro-4-nitro- 584-48-5, Benzene, 1-bromo-2,4-dinitro- 709-49-9,  
Benzene, 1-iodo-2,4-dinitro-  
(reaction with sulfite ion)

L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 10J (Organic Chemistry: Steroids)  
TI West African timbers. III. Petroleum extracts from the genus  
Entandrophragma  
IT Wood  
(West African)  
IT Nomenclature  
(``angolensic acid'', ``entandrophragmin'' and ``gedunin'')  
IT Entandrophragma

- (ligroine exts. of)
- IT Infrared spectra
- Ultraviolet and visible, spectra  
(of carda-1,4,20(22)-trienolides and intermediates)
- IT Infrared spectra
- Ultraviolet and visible, spectra  
(of Entandrophragma ligroine extractives)
- IT 31218-22-1, Utilin  
(from Entandrophragma heartwood)
- IT 83-46-5,  $\beta$ -Sitosterol 2629-14-3, Angolensic acid, methyl ester  
2753-30-2, Gedunin 3242-10-2, Angolensic acid  
(in Entandrophragma ligroine extracts)
- IT 11013-05-1, Entandrophragmin  
(in Entandrophragma ligroine exts.)
- IT 2629-11-0P, Oxireno[*c*]phenanthro[1,2-d]pyran-3,8(3aH,4bH)-dione,  
5-(acetoxy)-1-(3-furanyl)dodecahydro-4b,7,7,10a,12a-pentamethyl-  
101295-12-9P,  $\beta$ -Carda-1,20(22)-dienolide, 14-hydroxy-3-oxo-  
116956-84-4P, Carda-4,20(22)-dienolide, 14,16 $\beta$ -(dihydroxy-3-oxo-  
117000-03-0P,  $\beta$ -Carda-1,20(22)-dienolide, 14,16 $\beta$ -dihydroxy-3-  
oxo- 119186-29-7P, Carda-1,4,20(22)-trienolide, 14,16 $\beta$ -dihydroxy-3-  
oxo-, 16-acetate 119248-83-8P, Carda-1,4,20(22)-trienolide,  
14,16 $\beta$ -dihydroxy-3-oxo- 122174-94-1P,  $\beta$ -Carda-1,20(22)-  
dienolide, 14,16 $\beta$ -dihydroxy-3-oxo-, 16-acetate 122174-95-2P,  
Carda-4,20(22)-dienolide, 14,16 $\beta$ -(dihydroxy-3-oxo-, 16-acetate
- RL: PREP (Preparation)  
(preparation of)
- L2 35 ANSWERS HCPLUS COPYRIGHT 2008 ACS on STN
- CC 10 (Organic Chemistry)
- TI Studies in aromatic nucleophilic replacement. VI. Some effects of alkyl groups
- IT Substitution  
(aromatic)
- IT Alkyl groups  
(effect on aromatic nucleophilic substitution)
- IT Steric effects or Steric factors  
(in alkylfluoronitrobenzenes)
- IT Frequency factor  
(of replacement of F in benzene derivs. of MeO)
- IT Reaction kinetics and(or) velocity  
(of substitution (nucleophilic), of F in benzene derivs. by MeO)
- IT Methoxy group  
(reactions of, with alkylfluoronitrobenzene, kinetics of)
- IT Benzene, 1-tert-butyl-2-fluoro-2-nitro-  
Benzene, 1-tert-butyl-4-fluoro-4-nitro-  
Toluene, 2-fluoro-2-nitro-  
Toluene, 4-fluoro-4-nitro-
- RL: PREP (Preparation)
- IT 19878-55-8, Benzenesulfonic acid, 4,4'-thiodi-  
(derivs.)
- IT 446-10-6P, Toluene, 4-fluoro-2-nitro- 454-72-8P, Benzene,  
1-tert-butyl-3-fluoro-5-nitro- 489-18-9P, Benzene, 1-tert-butyl-2-fluoro-  
4-nitro- 499-08-1P, Toluene, 3-fluoro-5-nitro- 610-18-4P, Benzene,  
1-tert-butyl-4-fluoro-2-nitro- 621-85-2P, Pseudourea, 2-benzyl-2-thio-,  
compds. with o-(phenylthio)benzenesulfonic acid and  
(phenylthio)benzenesulfonic acids 1427-07-2P, Toluene, 2-fluoro-4-nitro-  
22385-63-3P, Benzene, 1-tert-butyl-3,5-dinitro- 22503-15-7P,  
Acetanilide, 4'-tert-butyl-2',6'-dinitro- 102316-81-4P, Benzenesulfonic  
acid, o-(phenylthio)-, compound with 2-benzyl-2-thiopseudourea  
103392-84-3P, Aniline, 2-tert-butyl-5-nitro- 105336-94-5P, Acetanilide,  
3'-tert-butyl-5'-nitro- 110245-61-9P, Benzenesulfonic acid,

*o*-(phenylthio)-, compound with 2-benzyl-2-thiopseudourea 500878-03-5P,  
Aniline, 3-tert-butyl-5-nitro-  
RL: PREP (Preparation)  
(preparation of)

L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 10 (Organic Chemistry)  
TI Nucleophilic activity towards an aromatic carbon atom  
IT Substitution  
(nucleophilic, in benzene ring)  
IT Reaction kinetics and(or) velocity  
(of substitution (nucleophilic), in benzene derivs.)  
IT Benzene ring  
(substitution in, nucleophilic)  
IT 71-43-2, Benzene  
(derivatives, substitution (nucleophilic) in)  
IT 350-46-9, Benzene, 1-fluoro-4-nitro-  
(reaction with nucleophilic reagents, kinetics of)

L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 7-0 (Enzymes)  
TI Energy transduction by respiratory complex I - an evaluation of current knowledge  
ST review energy transduction respiratory complex I; mitochondria electron transport complex review  
IT Electron transport system, biological  
(mechanism and energy transduction by respiratory complex I)  
IT 9028-04-0, Complex I (mitochondrial electron transport)  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(mechanism and energy transduction by respiratory complex I)

L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 2-0 (Mammalian Hormones)  
TI Myometrial activation and preterm labour: evidence supporting a role for the prostaglandin F receptor-a review  
ST review myometrium preterm labour prostaglandin F receptor  
IT Uterus  
(myometrium; role of prostaglandin F receptor in myometrial activation and preterm labour)  
IT Parturition disorders  
(premature parturition; role of prostaglandin F receptor in myometrial activation and preterm labour)  
IT Human  
(role of prostaglandin F receptor in myometrial activation and preterm labour)  
IT Prostanoid receptors  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(type FP; role of prostaglandin F receptor in myometrial activation and preterm labour)

L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 2-0 (Mammalian Hormones)  
TI Prostaglandins and parturition  
ST review prostaglandin amnion parturition; synthase prostaglandin H parturition review  
IT Amnion  
Parturition  
(prostaglandins and prostaglandin H synthase of human amnion in periparturient period)  
IT Prostaglandins  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

- (Biological study); PROC (Process)  
(prostaglandins and prostaglandin H synthase of human amnion in periparturient period)
- IT 39391-18-9, Prostaglandin H synthase  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(prostaglandins and prostaglandin H synthase of human amnion in periparturient period)
- L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 22-3 (Physical Organic Chemistry)
- TI Kinetics of the reactions of piperidine, n-butylamine, morpholine, and benzylamine with 2,4-dinitrophenyl phenyl ether
- ST amine substitution nitrophenyl ether; kinetics amination nitrophenyl ether
- IT Kinetics of amination  
(of dinitrophenyl Ph ether)
- IT 100-46-9, reactions 109-73-9, reactions 110-89-4, reactions  
110-91-8, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(amination by, of dinitrophenyl Ph ether, kinetics of)
- IT 2486-07-9  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(amination of, kinetics of)
- L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 22 (Physical Organic Chemistry)
- TI Ortho:para ratio in aromatic nucleophilic substitution
- ST arom nucleophilic substitution; nucleophilic substitution arom; ortho activation nucleophilic substitution; para activation nucleophilic substitution; substituent effect arom nucleophilic substitution
- IT Substituents  
(in benzene derivs., substitution reaction with methoxide in relation to)
- IT Kinetics of substitution reactions  
(of methoxide with benzene derivs., substituent effect in)
- IT 3315-60-4, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with benzene derivs., kinetics of, substituent effect in)
- IT 350-46-9 446-35-5 1493-27-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(substitution reaction of, with methoxide, kinetics of)
- L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 22 (Physical Organic Chemistry)
- TI Kinetics of some of the reactions of 2-fluoro- and 2-chloro-5-nitro-pyridines and 1-fluoro- and 1-chloro-2,4-dinitrobenzenes with aniline and piperidine in acetone and methanol
- ST nitropyridine aniline reaction; aniline nitropyridine reaction; pyridines nitro aniline reaction; benzenes nitro aniline reaction; arom nucleophilic reaction; nucleophilic arom reaction
- IT Kinetics, reactions  
(of amines with dinitrobenzene and nitropyridine halo derivs.)
- IT Activation energy  
(of aniline reactions with nitropyridine halo derivs.)
- IT 70-34-8 97-00-7 456-24-6  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reactions of, with amines)
- IT 4548-45-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reactions of, with aniline)
- IT 62-53-3, reactions 110-89-4, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)  
(with dinitrobenzenes and nitropyridine halo derivs., kinetics of)

- L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 22 (Physical Organic Chemistry)  
TI Aromatic nucleophilic replacement. XII. Reaction of 1-halo-2,4-dinitrobenzenes and 2-halo-5-nitropyridines with amines in acetone  
ST nucleophilic amines halo benzenes; amines halo benzenes nucleophilic; halo benzenes nucleophilic amines; benzenes nucleophilic amines halo; pyridines halo amines displacement; displacement pyridines halo amines  
IT Activation energy  
(of amine reactions with halodinitrobenzene derivs.)  
IT Kinetics, reaction  
(of amines with halodinitrobenzene derivs.)  
IT Pyridine, with halodinitrobenzene derivs., reactions  
RL: PRP (Properties)  
(kinetics of)  
IT 70-34-8 97-00-7 456-24-6 4548-45-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with amines, kinetics of)  
IT 62-53-3, reactions 110-89-4, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(with halodinitrobenzene derivs., kinetics of)
- L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 32 (Physical Organic Chemistry)  
TI Effect of meta-substituents on aromatic nucleophilic substitution  
IT Substituents  
(fluorobenzene derivative reaction with methoxide ion in relation to)  
IT Reaction kinetics and(or) Velocity  
Substitution reactions  
(of fluoro benzenes with methoxide ion)  
IT Methoxides  
(reaction with fluorobenzene)  
IT 71-43-2, Benzene  
(derivatives, fluoro, reaction with methoxide ion, effect of substituents on)  
IT 4815-64-9, Benzene, 1-chloro-3-fluoro-5-nitro-  
(reaction with methoxide ion kinetics of)  
IT 454-73-9, Toluene,  $\alpha,\alpha,\alpha,3$ -tetrafluoro-5-nitro-  
2265-94-3, Benzene, 1,3-difluoro-5-nitro- 2369-12-2, Aniline,  
3-fluoro-5-nitro- 3819-88-3, Benzene, 1-fluoro-3-iodo-5-nitro-  
7087-27-6, Sulfone, 3-fluoro-5-nitropotassium methyl 7087-60-7, Anisole,  
3-fluoro-5-nitro- 7087-61-8, Acetophenone, 3'-fluoro-5'-nitro-  
7087-65-2, Benzene, 1-bromo-3-fluoro-5-nitro- 14027-75-9, Benzoic acid,  
3-fluoro-5-nitro-  
(reaction with methoxide ion, kinetics of)
- L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 32 (Physical Organic Chemistry)  
TI Hydrogen bonding in the transition state of aromatic nucleophilic replacement  
IT Substitution reactions  
(in aromatic compds., H bonding and)  
IT Hydrogen bonds  
(in aromatic compds., nucleophilic displacement reactions and)  
IT Reaction kinetics and(or) Velocity  
(of aniline and pyridine with 2-chloro-1,3-dinitrobenzene and 2-fluoro-1,3-dinitrobenzene)  
IT 71-43-2, Benzene  
(derivatives, halo, displacement reactions of, H bonds and)

- IT 62-53-3, Aniline  
(reaction of, with 2-chloro-1,3-dinitrobenzene and 2-fluoro-1,3-dinitrobenzene, kinetics of)
- IT 110-86-1, Pyridine  
(reaction with 2-chloro-1,3-dinitrobenzene and 2-fluoro-1,3-dinitrobenzene, kinetics of)
- IT 573-55-7, Benzene, 2-fluoro-1,3-dinitro- 606-21-3, Benzene,  
2-chloro-1,3-dinitro-  
(reaction with PhNH<sub>2</sub> and pyridine, kinetics of)
- L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 11D (Biological Chemistry: Botany)  
TI West African timbers. II. Heartwood constituents of the genus Pterocarpus  
IT Pterocarpus  
(composition of heartwood of)
- IT 524-97-0, Pterocarpin 529-60-2, Isoflavone, 3',4',5-trihydroxy-7-methoxy-  
606-91-7, Homopterocarpin 642-39-7, Propiophenone,  
2',4'-dihydroxy-2-(p-methoxyphenyl)- 4339-72-4, Olean-12-en-28-oic acid,  
3β-hydroxy-, acetate  
(in Pterocarpus heartwood)
- L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 17 (Pharmaceuticals, Cosmetics, and Perfumes)  
TI A convulsant alkaloid of Dioscorea dumetorum  
IT Yams  
(alkaloids of)
- L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 14 (Water, Sewage, and Sanitation)  
TI Experimental work to improve the performance of a bio-aeration plant for  
sewage  
IT Sewage  
(aeration of, improving performance of plant for)
- L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 3-4 (Biochemical Genetics)  
Section cross-reference(s): 14  
TI Multiple mechanisms are implicated in the generation of 5q35  
microdeletions in Sotos syndrome  
ST chromosome 5q35 microdeletion mutation NSD1 Sotos syndrome human  
IT Gene, animal  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(NSD1; repetitive elements and rearrangements of paternally inherited  
chromosome associated with 5q35 NSD1 microdeletions in Sotos syndrome)
- IT Repetitive DNA  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(REPcen, REPtel, REPMid elements; repetitive elements and  
rearrangements of paternally inherited chromosome associated with 5q35  
NSD1 microdeletions in Sotos syndrome)
- IT Disease, animal  
(Sotos syndrome; repetitive elements and rearrangements of paternally  
inherited chromosome associated with 5q35 NSD1 microdeletions in Sotos  
syndrome)
- IT Mutation  
(deletion; repetitive elements and rearrangements of paternally  
inherited chromosome associated with 5q35 NSD1 microdeletions in Sotos  
syndrome)
- IT Chromosome  
(human 5, q35; repetitive elements and rearrangements of paternally  
inherited chromosome associated with 5q35 NSD1 microdeletions in Sotos  
syndrome)

IT Genetic inheritance  
(paternal; repetitive elements and rearrangements of paternally inherited chromosome associated with 5q35 NSD1 microdeletions in Sotos syndrome)

IT Recombination, genetic  
(rearrangement; repetitive elements and rearrangements of paternally inherited chromosome associated with 5q35 NSD1 microdeletions in Sotos syndrome)

IT Human  
(repetitive elements and rearrangements of paternally inherited chromosome associated with 5q35 NSD1 microdeletions in Sotos syndrome)

L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN

CC 15-8 (Immunochemistry)

TI Analysis of single-nucleotide polymorphisms in the interleukin-4 receptor gene for association with inflammatory bowel disease

ST Crohn disease IL4 receptor genetic polymorphism susceptibility

IT Intestine, disease  
(Crohn's; nucleotide polymorphisms in IL-4 receptor gene in inflammatory bowel disease)

IT DNA sequences

Genetic linkage

Susceptibility (genetic)  
(nucleotide polymorphisms in IL-4 receptor gene in inflammatory bowel disease)

IT Interleukin 4 receptors

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence)  
(nucleotide polymorphisms in IL-4 receptor gene in inflammatory bowel disease)

IT Intestine, disease  
(ulcerative colitis; nucleotide polymorphisms in IL-4 receptor gene in inflammatory bowel disease)

L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN

CC 22-4 (Physical Organic Chemistry)

TI Mechanisms of aromatic nucleophilic substitution reactions in ethyl acetate and tetrahydrofuran

ST ethyl acetate mechanism nucleophilic substitution; solvent effect  
mechanism nucleophilic substitution; THF mechanism arom nucleophile substitution

IT Amines, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)  
(aromatic nucleophilic substitution of, with halo- or phenoxydinitrobenzenes, kinetics and mechanism of)

IT Solvent effect  
(on aromatic nucleophilic substitution reactions of halo- or phenoxydinitrobenzenes with amines)

IT Substitution reaction, nucleophilic  
(aromatic, of halo- or phenoxydinitrobenzenes with amines, mechanism of)

IT Kinetics of substitution reaction  
(nucleophilic, aromatic, of halo- or phenoxydinitrobenzenes with amines, solvent effects on)

IT 70-34-8, 1-Fluoro-2,4-dinitrobenzene 97-00-7 2486-07-9

RL: RCT (Reactant); RACT (Reactant or reagent)  
(aromatic nucleophilic substitution of, with amines, solvent effects in relation to kinetics and mechanism of)

IT 100-46-9, Benzenemethanamine, reactions 109-73-9, 1-Butanamine, reactions 110-89-4, Piperidine, reactions 110-91-8, Morpholine, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

- (aromatic nucleophilic substitution reaction of, with halo- or phenoxydinitrobenzenes, kinetics and mechanism of)  
IT 110-89-4, Piperidine, uses and miscellaneous 280-57-9,  
1,4-Diazabicyclo[2.2.2]octane  
RL: PRP (Properties)  
(effect of, on aromatic nucleophilic substitution reactions of amines with halo- or phenoxydinitrobenzenes, solvent effects and)
- L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 22-3 (Physical Organic Chemistry)  
TI Ortho-para ratio in aromatic nucleophilic substitution. I.  
ST arom nucleophilic substitution kinetics; nitrobenzene nucleophilic substitution; halobenzene nucleophilic substitution; benzene halonitro substitution kinetics  
IT Substitution reaction  
(nucleophilic, of nitrobenzene halo derivs. with alkoxide ions)  
IT Kinetics of substitution reaction  
(of nitrobenzene halo derivs. with alkoxide ions)  
IT 88-73-3 100-00-5 350-46-9 446-35-5 611-06-3 1493-27-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(nucleophilic substitution of, by alkoxide ions)  
IT 40422-90-0P 40422-91-1P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
IT 3315-60-4, reactions 15520-32-8 16331-64-9, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(substitution reaction of, with nitrobenzene halo derivs.)
- L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 22 (Physical Organic Chemistry)  
TI Aromatic nucleophilic replacement. XV. Kinetics of the reactions of aniline with 1-fluoro and 1-chloro-2, 4-dinitrobenzenes in anhydrous acetone  
ST halobenzenes reaction aniline; aniline reaction halobenzenes; fluorobenzenes reaction aniline; chlorobenzenes reaction aniline; arom nucleophilic reaction kinetics; nucleophilic reaction kinetics arom; kinetics arom nucleophilic reaction  
IT Kinetics of amination  
(of dinitrobenzene halo derivs.)  
IT Amination  
(of dinitrobenzene halo derivs., mechanism of)  
IT 62-53-3, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(amination by, of dinitrobenzene halo derivs.)  
IT 70-34-8 97-00-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(amination of, with aniline, kinetics of)
- L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 73 (Spectra and Other Optical Properties)  
TI Fluorine nuclear magnetic resonance spectra of some meta-substituted fluorobenzenes  
ST fluorine NMR; NMR F; fluorobenzenes NMR; benzenes fluoro NMR  
IT Defluorination  
(methoxy, of fluorobenzene meta-substituted derivs., N.M.R. in relation to)  
IT Substituent constants  
(of fluorobenzene meta-substituted derivs., N.M.R. in relation to)  
IT Nuclear magnetic resonance  
(of fluorobenzene meta-substituted derivs., substituent consts. in relation to)

IT 462-06-6D, Benzene, fluoro-, derivs.  
RL: PRP (Properties)  
(nuclear magnetic resonance of, substituent consts. in relation to)

L2 35 ANSWERS HCPLUS COPYRIGHT 2008 ACS on STN  
CC 22 (Physical Organic Chemistry)

TI Aromatic nucleophilic replacement. XIV. Mode of transmission of the inductive effect in the benzene ring and the relative activating power of the  $+NMe_2^-$ ,  $+NMe_3$ , and  $NO_2$  groups in aromatic nucleophilic replacement reactions

ST NUCLEOPHILIC SUBSTITUTION AROM; AROM NUCLEOPHILIC SUBSTITUTION; SUBSTITUTION NUCLEOPHILIC AROM

IT Activation energy  
(of methoxide ion reaction with fluoronitroanilines)

IT Kinetics, reaction  
(of methoxide ion with fluoronitroaniline derivs.)

IT 19127-34-5 19127-35-6 19128-26-8 19128-27-9 19128-28-0  
20319-54-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with methoxide ion, kinetics of)

IT 3315-60-4, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(with fluoronitroaniline derivs., kinetics of)

L2 35 ANSWERS HCPLUS COPYRIGHT 2008 ACS on STN  
CC 35 (Noncondensed Aromatic Compounds)

TI Aromatic nucleophilic substitution. X. Products of reactions of alkali halides with 1-halo-2,4-dinitrobenzenes and picryl chloride in anhydrous acetone  
IT 99-35-4  
(Derived from data in the 7th Collective Formula Index (1962-1966))

IT 67-64-1, Acetone  
(alkali halide reaction with 1-halo-2,4-dinitrobenzene and picryl chloride in presence of)

IT 97-00-7, Benzene, 1-chloro-2,4-dinitro-  
(reaction of, with LiCl)

IT 7447-41-8, Lithium chloride  
(reaction with 1-chloro-2,4-dinitrobenzene)

IT 7681-82-5, Sodium iodide  
(reaction with 1-fluoro-2,4-dinitrobenzene and picryl chloride)

IT 70-34-8, Benzene, 1-fluoro-2,4-dinitro-  
(reaction with NaI)

IT 88-88-0, Benzene, 2-chloro-1,3,5-trinitro-  
(reactions with NaI)

L2 35 ANSWERS HCPLUS COPYRIGHT 2008 ACS on STN  
CC 10E (Organic Chemistry: Benzene Derivatives)

TI Aromatic nucleophilic replacement. VII. The reaction of  $N,N$ -dialkyl-p-nitrosoanilines with aqueous-methanolic alkali

IT Activation energy  
(Heat of activation, of reactions, of alkalies with  $N,N$ -dialkyl-p-nitrosoanilines)

IT Substitution  
(aromatic)

IT Reaction kinetics and(or) velocity  
(of alkalies with  $N,N$ -dialkyl-p-nitrosoanilines)

IT Dielectric constants  
(of methanol-water solvent, effect on alkali reaction with  $N,N$ -dialkyl-p-nitrosoanilines)

IT Alkalies  
(reactions of, with  $N,N$ -dialkyl-p-nitrosoanilines)

- IT 67-56-1, Methanol  
(alkali reaction with N,N-dialkyl-p-nitrosoanilines in aqueous)  
IT 7732-18-5, Water  
(effect on alkali reaction with N,N-dialkyl-p-nitrosoanilines)  
IT 104-91-6P, Phenol, p-nitroso-  
RL: PREP (Preparation)  
(formation from N,N-dimethyl-p-nitrosoaniline)  
IT 120-22-9, Aniline, N,N-diethyl-p-nitroso- 138-89-6, Aniline,  
N,N-dimethyl-p-nitroso- 36479-98-8, Aniline, N-ethyl-N-methyl-p-nitroso-  
(reaction with alkalies)  
IT 659-49-4, Aniline, p-nitroso-  
(N,N-dialkyl, reaction with alkalies)
- L2 35 ANSWERS HCPLUS COPYRIGHT 2008 ACS on STN  
CC 10 (Organic Chemistry)  
TI A convulsant alkaloid of *Dioscorea dumetorum*  
IT Yams  
(alkaloid from *D. dumetorum*)  
IT Alkaloids  
(from *Dioscorea dumetorum*)  
IT Convulsions  
(from *Dioscorea dumetorum* alkaloid)  
IT 469-45-4 4135-62-0 108950-53-4 109215-31-8 109405-17-6  
109405-18-7 109438-60-0 109499-09-4 109526-91-2 114984-53-1  
114984-54-2 116179-87-4 124152-44-9 124383-06-8 124383-07-9  
130931-57-6  
(Derived from data in the 6th Collective Formula Index (1957-1961))  
IT 96552-66-8, Dioscorine, dihydro-  
(and derivs., alkaloid from *Dioscorea dumetorum* in relation to)
- L2 35 ANSWERS HCPLUS COPYRIGHT 2008 ACS on STN  
CC 2 (General and Physical Chemistry)  
TI Studies in aromatic nucleophilic substitution. IV. Relative nucleophilic powers of common reagents  
IT Solvents  
(aromatic nucleophilic substitution and)  
IT Chlorides  
(exchange of, with picryl chloride)  
IT Substitution  
Substitution  
(of methoxy group in benzene derivs.)  
IT Reactivity  
(of reagents with nucleophilic power toward aromatic C atom in MeOH)  
IT Heat of activation  
(of substitution (aromatic nucleophilic))  
IT Frequency factor  
(of substitution (aromatic nucleophilic) in MeOH)  
IT Reaction kinetics and(or) velocity  
(of substitution (nucleophilic aromatic))  
IT Methoxy group  
(reaction with p-FC6H4NO2)  
IT 67-56-1, Methanol  
(effect on aromatic nucleophilic substitution)  
IT 7447-41-8, Lithium chloride  
(exchange with picryl chloride)  
IT 99-09-2, Aniline, m-nitro-  
(reaction with picryl chloride)  
IT 930-69-8, Benzenethiol, sodium derivative  
(reaction with p-FC6H4NO2)  
IT 62-53-3, Aniline  
(reaction with p-FC6H4NO2 or picryl chloride)

IT 67-56-1, Methanol  
(substitution (aromatic nucleophilic) in)  
IT 88-88-0, Picryl chloride  
(substitution (aromatic nucleophilic) of, kinetics of)  
IT 97-00-7, Benzene, 1-chloro-2,4-dinitro-  
(substitution (nucleophilic) in)  
IT 350-46-9, Benzene, 1-fluoro-4-nitro-  
(substitution in, kinetics of)

L2 35 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 14 (Water, Sewage, and Sanitation)  
TI Experiments on dewatering humus and activated sludges  
IT Sewage  
(drying sludge and its mixtures with humus and primary and secondary  
sludges)  
IT Humus or Humic substances  
(mixts. with activated sludges, drying)  
IT Fertilizers  
(sewage or sewage sludges as, effect of drying on)

ALL ANSWERS HAVE BEEN SCANNED

=> logoff  
ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF  
LOGOFF? (Y)/N/HOLD:y  
COST IN U.S. DOLLARS SINCE FILE TOTAL  
FULL ESTIMATED COST ENTRY SESSION  
16.14 16.35

STN INTERNATIONAL LOGOFF AT 14:47:34 ON 11 JUL 2008

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTAPPCM1655

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* \* \* \* \* \* Welcome to STN International \* \* \* \* \* \* \* \* \*

NEWS 1 Web Page for STN Seminar Schedule - N. America  
NEWS 2 JAN 02 STN pricing information for 2008 now available  
NEWS 3 JAN 16 CAS patent coverage enhanced to include exemplified  
prophetic substances  
NEWS 4 JAN 28 USPATFULL, USPAT2, and USPATOLD enhanced with new  
custom IPC display formats  
NEWS 5 JAN 28 MARPAT searching enhanced  
NEWS 6 JAN 28 USGENE now provides USPTO sequence data within 3 days  
of publication  
NEWS 7 JAN 28 TOXCENT enhanced with reloaded MEDLINE segment  
NEWS 8 JAN 28 MEDLINE and LMEDLINE reloaded with enhancements  
NEWS 9 FEB 08 STN Express, Version 8.3, now available

NEWS 10 FEB 20 PCI now available as a replacement to DPCI  
 NEWS 11 FEB 25 IFIREF reloaded with enhancements  
 NEWS 12 FEB 25 IMSPRODUCT reloaded with enhancements  
 NEWS 13 FEB 29 WPINDEX/WPIDS/WPIX enhanced with ECLA and current U.S. National Patent Classification  
 NEWS 14 MAR 31 IFICDB, IFIPAT, and IFIUDB enhanced with new custom IPC display formats  
 NEWS 15 MAR 31 CAS REGISTRY enhanced with additional experimental spectra  
 NEWS 16 MAR 31 CA/Caplus and CASREACT patent number format for U.S. applications updated  
 NEWS 17 MAR 31 LPCI now available as a replacement to LDPCI  
 NEWS 18 MAR 31 EMBASE, EMBAL, and LEMBASE reloaded with enhancements  
 NEWS 19 APR 04 STN AnaVist, Version 1, to be discontinued  
 NEWS 20 APR 15 WPIDS, WPINDEX, and WPIX enhanced with new predefined hit display formats  
 NEWS 21 APR 28 EMBASE Controlled Term thesaurus enhanced  
 NEWS 22 APR 28 IMRSEARCH reloaded with enhancements  
 NEWS 23 MAY 30 INPAFAMDB now available on STN for patent family searching  
 NEWS 24 MAY 30 DGENE, PCTGEN, and USGENE enhanced with new homology sequence search option  
 NEWS 25 JUN 06 EPFULL enhanced with 260,000 English abstracts  
 NEWS 26 JUN 06 KOREPAT updated with 41,000 documents  
 NEWS 27 JUN 13 USPATFULL and USPAT2 updated with 11-character patent numbers for U.S. applications  
 NEWS 28 JUN 19 CAS REGISTRY includes selected substances from web-based collections  
 NEWS 29 JUN 25 CA/Caplus and USPAT databases updated with IPC reclassification data  
 NEWS 30 JUN 30 AEROSPACE enhanced with more than 1 million U.S. patent records  
 NEWS 31 JUN 30 EMBASE, EMBAL, and LEMBASE updated with additional options to display authors and affiliated organizations  
 NEWS 32 JUN 30 STN on the Web enhanced with new STN AnaVist Assistant and BLAST plug-in  
 NEWS 33 JUN 30 STN AnaVist enhanced with database content from EPFUL  
  
 NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,  
     AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

**NEWS HOURS** STN Operating Hours Plus Help Desk Availability  
**NEWS LOGIN** Welcome Banner and News Items  
**NEWS IPC8** For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

FILE 'HOME' ENTERED AT 13:19:14 ON 14 JUL 2008

**FULL ESTIMATED COST**

ENTRY SESSION  
0.21 0.21

FILE 'HCAPLUS' ENTERED AT 13:19:39 ON 14 JUL 2008  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 14 Jul 2008 VOL 149 ISS 3  
FILE LAST UPDATED: 13 Jul 2008 (20080713/EP)

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2008.

New CAS Information Use Policies; enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> b cap1  
COST IN U.S. DOLLARS  
SINCE FILE ENTRY SESSION  
SESSION  
2.69 2.90

FILE 'CAPLUS' ENTERED AT 13:19:58 ON 14 JUL 2008  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 14 Jul 2008 VOL 149 ISS 3  
FILE LAST UPDATED: 13 Jul 2008 (20080713/EP)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2008.

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/legal/infopolicy.html>

```
=> e 2006-551144/apps
**** START OF FIELD ****
E3          0 --> 2006-551144/AP
E4          0     2006-551144/PRN
E5          1     AD2000-10003588/PRN
E6          1     AD2001-2185/PRN
E7          1     AD2002-10243254/PRN
E8          1     AD2003-352770/PRN
E9          9     AD2004-509935/PRN
E10         1     AE2000-40/PRN
E11         1     AE2003-186/PRN
E12         1     AE2003-274/PRN

=> fil hcapi
COST IN U.S. DOLLARS                               SINCE FILE      TOTAL
                                                       ENTRY SESSION
FULL ESTIMATED COST                           0.48        3.38
```

FILE 'HCAPLUS' ENTERED AT 13:20:49 ON 14 JUL 2008  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
 COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 14 Jul 2008 VOL 149 ISS 3  
 FILE LAST UPDATED: 13 Jul 2008 (20080713/ED)

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2008.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> e hirst j/au
E1          2     HIRST IAN D/AU
E2          1     HIRST IAN J/AU
E3          35 --> HIRST J/AU
E4          7     HIRST J A/AU
E5          1     HIRST J C/AU
E6          6     HIRST J D/AU
E7          1     HIRST J E/AU
E8          4     HIRST J F/AU
E9          14    HIRST J J/AU
E10         6     HIRST J M/AU
E11         1     HIRST J N/AU
E12         1     HIRST J P/AU
```

=> e hirst judy/au

E1 1 HIRST JONATHAN MICHAEL/AU  
E2 2 HIRST JUDITH W/AU  
E3 57 --> HIRST JUDY/AU  
E4 8 HIRST K/AU  
E5 2 HIRST K L/AU  
E6 5 HIRST KAREN/AU  
E7 3 HIRST KAREN L/AU  
E8 1 HIRST KATE/AU  
E9 6 HIRST KATHRYN/AU  
E10 1 HIRST KENDALYN/AU  
E11 2 HIRST KIM LOUISE/AU  
E12 5 HIRST L/AU

=> s e3  
L1 57 "HIRST JUDY"/AU

=> s L1 and (module or subunit or subcomplex)  
69447 MODULE  
33599 MODULES  
88029 MODULE  
    (MODULE OR MODULES)  
172960 SUBUNIT  
108511 SUBUNITS  
227292 SUBUNIT  
    (SUBUNIT OR SUBUNITS)  
791 SUBCOMPLEX  
495 SUBCOMPLEXES  
1125 SUBCOMPLEX  
    (SUBCOMPLEX OR SUBCOMPLEXES)

L2 16 L1 AND (MODULE OR SUBUNIT OR SUBCOMPLEX)

=> d scan

L2 16 ANSWERS HCPLUS COPYRIGHT 2008 ACS on STN  
CC 3-3 (Biochemical Genetics)  
Section cross-reference(s): 7, 13  
TI Definition of the nuclear encoded protein composition of bovine heart  
mitochondrial complex I  
ST cattle mitochondria DNA B14 ESSS ubiquinone oxidoreductase transmembrane  
import  
IT Gene, animal  
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL  
(Biological study)  
    (for ubiquinone reductase subunit B14.7; nuclear encoded  
    protein composition of bovine heart mitochondrial complex I)  
IT Gene, animal  
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL  
(Biological study)  
    (for ubiquinone reductase subunit ESSS; nuclear encoded  
    protein composition of bovine heart mitochondrial complex I)  
IT Bos taurus  
Protein sequences  
cDNA sequences  
    (nuclear encoded protein composition of bovine heart mitochondrial complex  
    I)  
IT Biological transport  
    (of B14.7 and ESSS subunits; nuclear encoded protein composition  
    of bovine heart mitochondrial complex I)  
IT Mitochondria  
    (organelle-specific enzyme subunits; nuclear encoded protein  
    composition of bovine heart mitochondrial complex I)

IT Protein motifs  
(transmembrane domain, of B14.7 and ESSS subunits; nuclear encoded protein composition of bovine heart mitochondrial complex I)  
IT 9028-04-0, Complex I (NADH: Q1 oxidoreductase)  
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)  
(B14.7 and ESSS subunits, genes for; nuclear encoded protein composition of bovine heart mitochondrial complex I)  
IT 481508-21-8 501835-66-1  
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)  
(amino acid sequence; nuclear encoded protein composition of bovine heart mitochondrial complex I)  
IT 465948-36-1 494391-25-2  
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)  
(nucleotide sequence; nuclear encoded protein composition of bovine heart mitochondrial complex I)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):5

L2 16 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 14-15 (Mammalian Pathological Biochemistry)  
Section cross-reference(s): 6  
TI Reversible Glutathionylation of Complex I Increases Mitochondrial Superoxide Formation  
ST glutathione complex I mitochondria superoxide  
IT Disulfides  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(mixed; reversible glutathionylation of complex I increases mitochondrial superoxide formation)  
IT Mitochondria  
Oxidative stress, biological  
(reversible glutathionylation of complex I increases mitochondrial superoxide formation)  
IT 70-18-8, Glutathione, biological studies 7722-84-1, Hydrogen peroxide, biological studies 9028-04-0, Complex I (mitochondrial electron transport) 11062-77-4, Superoxide 27025-41-8, Glutathione disulfide  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(reversible glutathionylation of complex I increases mitochondrial superoxide formation)

L2 16 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 7-6 (Enzymes)  
Section cross-reference(s): 13  
TI The post-translational modifications of the nuclear encoded subunits of complex I from bovine heart mitochondria  
ST mitochondria complex I subunit post translational modification  
IT Acetylation  
Myristylation  
(N-terminal; post-translational modifications of nuclear encoded subunits of complex I from bovine heart mitochondria)  
IT Functional groups  
(myristoyl group; post-translational modifications of nuclear encoded subunits of complex I from bovine heart mitochondria)  
IT Methylation  
(of histidine residues; post-translational modifications of nuclear encoded subunits of complex I from bovine heart mitochondria)  
IT Acetyl group  
Bos taurus  
Heart

Methyl group  
Mitochondria  
Post-translational processing  
(post-translational modifications of nuclear encoded subunits  
of complex I from bovine heart mitochondria)  
IT 71-00-1D, L-Histidine, methylated derivs.  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(post-translational modifications of nuclear encoded subunits  
of complex I from bovine heart mitochondria)  
IT 9028-04-0, Complex I (mitochondrial electron transport)  
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL  
(Biological study)  
(post-translational modifications of nuclear encoded subunits  
of complex I from bovine heart mitochondria)

L2 16 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 7-5 (Enzymes)  
TI Bovine complex I is a complex of 45 different subunits  
ST NADH ubiquinone reductase mitochondria complex I subunit compn  
IT Mitochondria  
(bovine mitochondrial complex I/NADH-ubiquinone reductase is a complex  
of 45 different subunits)  
IT Quaternary structure  
(protein; bovine mitochondrial complex I/NADH-ubiquinone reductase is a  
complex of 45 different subunits)  
IT 9028-04-0  
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL  
(Biological study)  
(bovine mitochondrial complex I/NADH-ubiquinone reductase is a complex  
of 45 different subunits)

L2 16 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 3-4 (Biochemical Genetics)  
Section cross-reference(s): 7  
TI An iron-sulfur domain of the eukaryotic primase is essential for RNA  
primer synthesis  
ST archaea eukaryote primase iron sulfur cluster RNA primer replication  
IT Primers (nucleic acid)  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(RNA; iron-sulfur domain of heterodimeric archaeal/eukaryotic primase  
is essential for RNA primer synthesis)  
IT Archaea  
Eukaryota  
Saccharomyces cerevisiae  
Sulfolobus solfataricus  
(iron-sulfur domain of heterodimeric archaeal/eukaryotic primase is  
essential for RNA primer synthesis)  
IT Iron-sulfur clusters (protein)  
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL  
(Biological study)  
(iron-sulfur domain of heterodimeric archaeal/eukaryotic primase is  
essential for RNA primer synthesis)  
IT Evolution  
(mol., conservative; iron-sulfur domain of heterodimeric  
archaeal/eukaryotic primase is essential for RNA primer synthesis)  
IT RNA  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(primer; iron-sulfur domain of heterodimeric archaeal/eukaryotic  
primase is essential for RNA primer synthesis)  
IT DNA replication  
(replication initiation; iron-sulfur domain of heterodimeric

archaeal/eukaryotic primase is essential for RNA primer synthesis)  
IT 7439-89-6D, Iron, -sulfur clusters, biological studies 7704-34-9D,  
Sulfur, -iron clusters, biological studies 64885-96-7, Primase  
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL  
(Biological study)  
(iron-sulfur domain of heterodimeric archaeal/eukaryotic primase is  
essential for RNA primer synthesis)

L2 16 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 7-4 (Enzymes)  
TI Redox Properties of the [2Fe-2S] Center in the 24 kDa (NQO2)  
Subunit of NADH:Ubiquinone Oxidoreductase (Complex I)  
ST ubiquinone oxidoreductase complex I redox iron sulfur cluster  
IT Cluster compounds  
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL  
(Biological study)  
(iron-sulfur; redox properties of [2Fe-2S] center in 24 kDa (NQO2)  
subunit of NADH:Ubiquinone oxidoreductase (complex I))  
IT Mitochondria  
Redox reaction  
Reduction potential  
(redox properties of [2Fe-2S] center in 24 kDa (NQO2) subunit  
of NADH:Ubiquinone oxidoreductase (complex I))  
IT Iron-sulfur clusters (protein)  
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL  
(Biological study)  
(redox properties of [2Fe-2S] center in 24 kDa (NQO2) subunit  
of NADH:Ubiquinone oxidoreductase (complex I))  
IT 7439-89-6D, Iron, sulfur cluster 7704-34-9D, Sulfur, iron cluster  
9028-04-0, NADH:Ubiquinone oxidoreductase  
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL  
(Biological study)  
(redox properties of [2Fe-2S] center in 24 kDa (NQO2) subunit  
of NADH:Ubiquinone oxidoreductase (complex I))

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):5

L2 16 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 7-3 (Enzymes)  
TI Reversible, electrochemical interconversion of NADH and NAD<sup>+</sup> by the  
catalytic (I $\alpha$ ) subcomplex of mitochondrial  
NADH:ubiquinone oxidoreductase (Complex I)  
ST NADH NAD interconversion subcomplex ubiquinone reductase  
mitochondria  
IT Mitochondria  
(reversible, electrochem. interconversion of NADH and NAD by catalytic  
subcomplex of mitochondrial complex I in relation to FMN and  
[2Fe-2S] cluster)  
IT Iron-sulfur clusters (protein)  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(reversible, electrochem. interconversion of NADH and NAD by catalytic  
subcomplex of mitochondrial complex I in relation to FMN and  
[2Fe-2S] cluster)  
IT 53-84-9, NAD 58-68-4, NADH 146-17-8, FMN 7439-89-6D, Iron, -sulfur  
clusters 7704-34-9D, Sulfur, -iron clusters 9028-04-0D, Ubiquinone  
reductase, I $\alpha$  subcomplexes  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(reversible, electrochem. interconversion of NADH and NAD by catalytic  
subcomplex of mitochondrial complex I in relation to FMN and  
[2Fe-2S] cluster)

L2 16 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
IC ICM C12Q001-00  
CC 9-7 (Biochemical Methods)  
Section cross-reference(s): 7

TI Pyridine nucleotide dehydrogenase based biosensor electrodes  
ST pyridine nucleotide dehydrogenase biosensor electrode  
IT Biosensors  
Electrochemical cells  
Enzyme electrodes  
(pyridine nucleotide dehydrogenase based biosensor electrodes)  
IT 53-59-8, NADP 53-84-9, NAD  
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)  
(pyridine nucleotide dehydrogenase based biosensor electrodes)  
IT 4432-31-9, MES 7365-45-9, HEPES 7778-53-2, Potassium phosphate 29915-38-6, TAPS  
RL: ARU (Analytical role, unclassified); ANST (Analytical study)  
(pyridine nucleotide dehydrogenase based biosensor electrodes)  
IT 9028-04-0, NADH ubiquinone oxidoreductase 9032-24-0, E.C.1.11.1  
9079-67-8, E.C.1.6.99.3 111590-41-1, Pyridine nucleotide oxidoreductase  
RL: ARU (Analytical role, unclassified); PEP (Physical, engineering or chemical process); PYF (Physical process); ANST (Analytical study); PROC (Process)  
(pyridine nucleotide dehydrogenase based biosensor electrodes)  
IT 1312-43-2, Indium oxide 1332-29-2, Tin oxide 7439-88-5, Iridium, uses 7440-05-3, Palladium, uses 7440-06-4, Platinum, uses 7440-22-4, Silver, uses 7440-33-7, Tungsten, uses 7440-44-0, Carbon, uses 7440-57-5, Gold, uses 7782-40-3, Diamond, uses 13463-67-7, Titanium oxide, uses  
RL: DEV (Device component use); USES (Uses)  
(pyridine nucleotide dehydrogenase based biosensor electrodes)

L2 16 ANSWERS HCAPLUS COPYRIGHT 2008 ACS on STN  
CC 7-4 (Enzymes)  
TI Interpreting the Catalytic Voltammetry of an Adsorbed Enzyme by Considering Substrate Mass Transfer, Enzyme Turnover, and Interfacial Electron Transport  
ST NADH ubiquinone oxidoreductase adsorption electrode catalytic voltammetry  
IT Oxidation  
(enzymic; model for voltammetric behavior of subcomplex IX during NADH oxidation incorporates kinetics, substrate mass transfer, and interfacial electron transport)  
IT Electron transport  
(interfacial; model for voltammetric behavior of subcomplex IX during NADH oxidation incorporates kinetics, substrate mass transfer, and interfacial electron transport)  
IT Enzyme kinetics  
Mass transfer  
Voltammetry  
(model for voltammetric behavior of subcomplex IX during NADH oxidation incorporates kinetics, substrate mass transfer, and interfacial electron transport)  
IT Adsorption  
(protein, electrode surface; model for voltammetric behavior of subcomplex IX during NADH oxidation incorporates kinetics, substrate mass transfer, and interfacial electron transport)  
IT 58-68-4, NADH  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(model for voltammetric behavior of subcomplex IX during NADH oxidation incorporates kinetics, substrate mass transfer, and interfacial electron transport)

IT 9028-04-0, NADH-ubiquinone oxidoreductase  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(subcomplex I $\alpha$ ; model for voltammetric behavior of  
subcomplex I $\alpha$  during NADH oxidation incorporates kinetics,  
substrate mass transfer, and interfacial electron transport)

L2 16 ANSWERS HCPLUS COPYRIGHT 2008 ACS on STN  
CC 7-5 (Enzymes)

TI Reevaluating the relationship between EPR spectra and enzyme structure for  
the iron-sulfur clusters in NADH:quinone oxidoreductase  
ST NADH quinone oxidoreductase structure iron sulfur cluster EPR spectra  
IT ESR spectroscopy  
Electron transfer  
Escherichia coli  
(re-evaluation of the relation between EPR spectra and enzyme structure  
for the Fe-S clusters in NADH-quinone oxidoreductase of Escherichia  
coli)

IT Iron-sulfur clusters (protein)  
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL  
(Biological study)  
(re-evaluation of the relation between EPR spectra and enzyme structure  
for the Fe-S clusters in NADH-quinone oxidoreductase of Escherichia  
coli)

IT 7439-89-6D, Iron, sulfur clusters, biological studies 7704-34-9D,  
Sulfur, iron clusters, biological studies  
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL  
(Biological study)  
(re-evaluation of the relation between EPR spectra and enzyme structure  
for the Fe-S clusters in NADH-quinone oxidoreductase of Escherichia  
coli)

IT 37256-36-3, NADH-quinone oxidoreductase  
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL  
(Biological study)  
(subunit NuoG; re-evaluation of the relation between EPR  
spectra and enzyme structure for the Fe-S clusters in NADH-quinone  
oxidoreductase of Escherichia coli)

L2 16 ANSWERS HCPLUS COPYRIGHT 2008 ACS on STN  
CC 3-4 (Biochemical Genetics)  
Section cross-reference(s): 7, 13

TI GRIM-19, a cell death regulatory gene product, is a subunit of  
bovine mitochondrial NADH: ubiquinone oxidoreductase (complex I)  
ST sequence cattle human ubiquinone oxidoreductase apoptosis  
IT Bos taurus  
Human  
(GRIM-19, a cell death regulatory gene product, is a subunit  
of bovine mitochondrial ubiquinone oxidoreductase (complex I))

IT Gene, animal  
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL  
(Biological study)  
(GRIM-19; GRIM-19, a cell death regulatory gene product, is a  
subunit of bovine mitochondrial ubiquinone oxidoreductase  
(complex I))

IT Mitochondria  
(complex I; GRIM-19, a cell death regulatory gene product, is a  
subunit of bovine mitochondrial ubiquinone oxidoreductase  
(complex I))

IT Protein sequences  
cDNA sequences  
(of cattle ubiquinone oxidoreductase; GRIM-19, a cell death regulatory  
gene product, is a subunit of bovine mitochondrial ubiquinone

IT oxidoreductase (complex I))

IT Interferons

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
( $\beta$ , induces ubiquinone oxidoreductase; GRIM-19, a cell death regulatory gene product, is a subunit of bovine mitochondrial ubiquinone oxidoreductase (complex I))

IT 9028-04-0, NADH:ubiquinone oxidoreductase

RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)  
(GRIM-19, a cell death regulatory gene product, is a subunit of bovine mitochondrial ubiquinone oxidoreductase (complex I))

IT 303817-41-6 408490-49-3

RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)  
(amino acid sequence; GRIM-19, a cell death regulatory gene product, is a subunit of bovine mitochondrial ubiquinone oxidoreductase (complex I))

IT 302-79-4, Retinoic acid

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(induces ubiquinone oxidoreductase; GRIM-19, a cell death regulatory gene product, is a subunit of bovine mitochondrial ubiquinone oxidoreductase (complex I))

IT 300761-17-5, GenBank AF286697 360345-67-1, GenBank AJ316011

RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)  
(nucleotide sequence; GRIM-19, a cell death regulatory gene product, is a subunit of bovine mitochondrial ubiquinone oxidoreductase (complex I))

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):end

FILE 'STNGUIDE' ENTERED AT 13:25:12 ON 14 JUL 2008  
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT  
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

FILE CONTAINS CURRENT INFORMATION.  
LAST RELOADED: Jul 11, 2008 (20080711/UP).

=> fil hcpl  
COST IN U.S. DOLLARS  
SINCE FILE ENTRY SESSION  
0.24 22.45

FILE 'HCAPLUS' ENTERED AT 13:27:29 ON 14 JUL 2008  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing

of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 14 Jul 2008 VOL 149 ISS 3  
FILE LAST UPDATED: 13 Jul 2008 (20080713/ED)

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2008.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s mitochondri## (2a) complex
    179452 MITOCHONDRI##
    1421511 COMPLEX
    778330 COMPLEXES
    1729181 COMPLEX
        (COMPLEX OR COMPLEXES)
L3      5513 MITOCHONDRI## (2A) COMPLEX
```

```
=> s nq01
L4      25 NQ01
```

```
=> s catalytic
    456151 CATALYTIC
    6 CATALYTICS
L5      456155 CATALYTIC
        (CATALYTIC OR CATALYTICS)
```

```
=> s electric?
    1389713 ELECTRIC?
    1142379 ELEC
        401 ELECS
    1142491 ELEC
        (ELEC OR ELECS)
L6      1897520 ELECTRIC?
        (ELECTRIC? OR ELEC)
```

```
=> s electrod##?
```

'#' TRUNCATION SYMBOL NOT VALID WITHIN 'ELECTROD##?'  
The truncation symbol # may be used only at the end of a search term.  
To specify a variable character within a word use '!', e.g., 'wom!n'  
to search for both 'woman' and 'women'. Enter "HELP TRUNCATION" at an  
arrow prompt (>) for more information.

```
=> s pyridine
    225496 PYRIDINE
    16210 PYRIDINES
L7      230215 PYRIDINE
        (PYRIDINE OR PYRIDINES)
```

```
=> s nad#
```

L8            84910 NAD#

=> s nicotinamide

23358 NICOTINAMIDE  
        431 NICOTINAMIDES  
L9        23475 NICOTINAMIDE  
            (NICOTINAMIDE OR NICOTINAMIDES)

=> s complex

1421511 COMPLEX  
    778330 COMPLEXES  
L10      1729181 COMPLEX  
            (COMPLEX OR COMPLEXES)

=> s module

69447 MODULE  
    33599 MODULES  
L11      88029 MODULE  
            (MODULE OR MODULES)

=> s subunit

172960 SUBUNIT  
    108511 SUBUNITS  
L12      227292 SUBUNIT  
            (SUBUNIT OR SUBUNITS)

=> d his

(FILE 'HOME' ENTERED AT 13:19:14 ON 14 JUL 2008)  
FILE 'HCAPLUS' ENTERED AT 13:19:39 ON 14 JUL 2008  
FILE 'CAPLUS' ENTERED AT 13:19:58 ON 14 JUL 2008  
    E 2006-551144/APPS  
FILE 'HCAPLUS' ENTERED AT 13:20:49 ON 14 JUL 2008  
    E HIRST J/AU  
    E HIRST JUDY/AU  
L1        57 S E3  
L2        16 S L1 AND (MODULE OR SUBUNIT OR SUBCOMPLEX)  
FILE 'STNGUIDE' ENTERED AT 13:25:12 ON 14 JUL 2008  
FILE 'HCAPLUS' ENTERED AT 13:27:29 ON 14 JUL 2008  
    5513 S MITOCHONDRI## (2A) COMPLEX  
L3        25 S NQ01  
L4        456155 S CATALYTIC  
L5        1897520 S ELECTRIC?  
L6        230215 S PYRIDINE  
L8        84910 S NAD#  
L9        23475 S NICOTINAMIDE  
L10      1729181 S COMPLEX  
L11      88029 S MODULE  
L12      227292 S SUBUNIT

=> s L3-L4 and L5-L6 and L8-L9 and L10-L12

```

L13          97 (L3 OR L4) AND (L5 OR L6) AND (L8 OR L9) AND (L10 OR L11 OR L12)

=> s L13 and electrod##  

    713753 ELECTROD##  

L14          1 L13 AND ELECTROD##

=> d scan

L14  1 ANSWERS  HCPLUS COPYRIGHT 2008 ACS on STN
CC  7-3 (Enzymes)
TI  Reversible, electrochemical interconversion of NADH and
    NAD+ by the catalytic (I $\lambda$ ) subcomplex of
    mitochondrial NADH:ubiquinone oxidoreductase (Complex
    I)
ST  NADH NAD interconversion subcomplex ubiquinone
    reductase mitochondria
IT  Mitochondria
    (reversible, electrochem. interconversion of NADH and
    NAD by catalytic subcomplex of mitochondrial
    complex I in relation to FMN and [2Fe-2S] cluster)
IT  Iron-sulfur clusters (protein)
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (reversible, electrochem. interconversion of NADH and
        NAD by catalytic subcomplex of mitochondrial
        complex I in relation to FMN and [2Fe-2S] cluster)
IT  53-84-9, NAD 58-68-4, NADH 146-17-8, FMN
    7439-89-6D, Iron, -sulfur clusters 7704-34-9D, Sulfur, -iron clusters
    9028-04-0D, Ubiquinone reductase, I $\lambda$  subcomplexes
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (reversible, electrochem. interconversion of NADH and
        NAD by catalytic subcomplex of mitochondrial
        complex I in relation to FMN and [2Fe-2S] cluster)

```

ALL ANSWERS HAVE BEEN SCANNED

```

=> fil stnguide
COST IN U.S. DOLLARS                      SINCE FILE      TOTAL
                                             ENTRY      SESSION
FULL ESTIMATED COST                         13.45       35.90

```

```

FILE 'STNGUIDE' ENTERED AT 13:30:34 ON 14 JUL 2008
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

```

```

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Jul 11, 2008 (20080711/UP).

```

```

=> fil caplus, medline, biotechno, biosis, biotechds, esbiobase, scisearch
COST IN U.S. DOLLARS                      SINCE FILE      TOTAL
                                             ENTRY      SESSION
FULL ESTIMATED COST                         0.06       35.96

```

```

FILE 'CAPLUS' ENTERED AT 13:31:25 ON 14 JUL 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

```

FILE 'MEDLINE' ENTERED AT 13:31:25 ON 14 JUL 2008

FILE 'BIOTECHNO' ENTERED AT 13:31:25 ON 14 JUL 2008

COPYRIGHT (C) 2008 Elsevier Science B.V., Amsterdam. All rights reserved.

FILE 'BIOSIS' ENTERED AT 13:31:25 ON 14 JUL 2008  
Copyright (c) 2008 The Thomson Corporation

FILE 'BIOTECHDS' ENTERED AT 13:31:25 ON 14 JUL 2008  
COPYRIGHT (C) 2008 THOMSON REUTERS

FILE 'ESBIOBASE' ENTERED AT 13:31:25 ON 14 JUL 2008  
COPYRIGHT (C) 2008 Elsevier Science B.V., Amsterdam. All rights reserved.

FILE 'SCISEARCH' ENTERED AT 13:31:25 ON 14 JUL 2008  
Copyright (c) 2008 The Thomson Corporation

=> s mitochondri## (2a) complex

L15 19796 MITOCHONDRI## (2A) COMPLEX

=> s nq01

L16 164 NQ01

=> s catalytic

L17 901130 CATALYTIC

=> s electric?

L18 2812607 ELECTRIC?

=> s electrod##?

'#' TRUNCATION SYMBOL NOT VALID WITHIN 'ELECTROD##?'  
The truncation symbol # may be used only at the end of a search term.  
To specify a variable character within a word use '!', e.g., 'womin'  
to search for both 'woman' and 'women'. Enter "HELP TRUNCATION" at an  
arrow prompt (>) for more information.

=> s pyridine

L19 353028 PYRIDINE

=> s nad#

L20 300162 NAD#

=> s nicotinamide

L21 75155 NICOTINAMIDE

=> s complex

L22 4799957 COMPLEX

=> s module

L23 202305 MODULE

=> s subunit

L24 977572 SUBUNIT

=> d his

(FILE 'HOME' ENTERED AT 13:19:14 ON 14 JUL 2008)

FILE 'HCAPLUS' ENTERED AT 13:19:39 ON 14 JUL 2008

FILE 'CAPLUS' ENTERED AT 13:19:58 ON 14 JUL 2008  
E 2006-551144/APPS

FILE 'HCAPLUS' ENTERED AT 13:20:49 ON 14 JUL 2008  
E HIRST J/AU

E HIRST JUDY/AU

L1 57 S E3  
L2 16 S L1 AND (MODULE OR SUBUNIT OR SUBCOMPLEX)

FILE 'STNGUIDE' ENTERED AT 13:25:12 ON 14 JUL 2008

FILE 'HCAPLUS' ENTERED AT 13:27:29 ON 14 JUL 2008  
L3 5513 S MITOCHONDRI## (2A) COMPLEX

L4 25 S NQ01  
L5 456155 S CATALYTIC  
L6 1897520 S ELECTRIC?  
L7 230215 S PYRIDINE  
L8 84910 S NAD#  
L9 23475 S NICOTINAMIDE  
L10 1729181 S COMPLEX  
L11 88029 S MODULE  
L12 227292 S SUBUNIT  
L13 97 S L3-L4 AND L5-L6 AND L8-L9 AND L10-L12  
L14 1 S L13 AND ELECTROD##

FILE 'STNGUIDE' ENTERED AT 13:30:34 ON 14 JUL 2008

FILE 'CAPLUS, MEDLINE, BIOTECHNO, BIOSIS, BIOTECHDS, ESBIOBASE,  
SCISEARCH' ENTERED AT 13:31:25 ON 14 JUL 2008

L15 19796 S MITOCHONDRI## (2A) COMPLEX  
L16 164 S NQ01  
L17 901130 S CATALYTIC  
L18 2812607 S ELECTRIC?  
L19 353028 S PYRIDINE  
L20 300162 S NAD#  
L21 75155 S NICOTINAMIDE  
L22 4799957 S COMPLEX  
L23 202305 S MODULE  
L24 977572 S SUBUNIT

=> s (L15 or L16) and L17-18 and (L19 or L20 or L21) and L22-24  
L25 283 (L15 OR L16) AND (L17 OR L18) AND (L19 OR L20 OR L21) AND (L22  
OR L23 OR L24)

=> s L25 and electrod##  
L26 1 L25 AND ELECTROD##

=> d scan

L26 1 ANSWERS CAPLUS COPYRIGHT 2008 ACS on STN  
CC 7-3 (Enzymes)  
TI Reversible, electrochemical interconversion of NADH and  
NAD+ by the catalytic (I $\lambda$ ) subcomplex of

mitochondrial NADH:ubiquinone oxidoreductase (Complex I)  
ST NADH NAD interconversion subcomplex ubiquinone reductase mitochondria  
IT Mitochondria  
(reversible, electrochem. interconversion of NADH and NAD by catalytic subcomplex of mitochondrial complex I in relation to FMN and [2Fe-2S] cluster)  
IT Iron-sulfur clusters (protein)  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(reversible, electrochem. interconversion of NADH and NAD by catalytic subcomplex of mitochondrial complex I in relation to FMN and [2Fe-2S] cluster)  
IT 53-84-9, NAD 58-68-4, NADH 146-17-8, FMN 7439-89-6D, Iron, -sulfur clusters 7704-34-9D, Sulfur, -iron clusters 9028-04-0D, Ubiquinone reductase, IX subcomplexes  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(reversible, electrochem. interconversion of NADH and NAD by catalytic subcomplex of mitochondrial complex I in relation to FMN and [2Fe-2S] cluster)

ALL ANSWERS HAVE BEEN SCANNED

=> logoff